CLAIMS

1   1. *(currently amended)* A system comprising:
2   a simulator including:
3   a virtual-failure event selector providing for selecting a virtual-
4   failure event corresponding to a real-failure event that applies to a
5   real computer cluster, and
6   a virtual-cluster generator for generating a first virtual cluster in
7   a virtual pre-failure configuration corresponding to a real pre-failure
8   configuration of said real computer cluster, and for, in response to
9   selection of said virtual-failure event, for generating a second virtual
10   cluster in a virtual post-failure configuration corresponding to a real
11   post-failure configuration of said real computer cluster.

1   2. *(original)* A system as recited in Claim 1 wherein, in said real
2   pre-failure configuration, said real computer cluster runs a software
3   application AC on a first computer of said real computer cluster and
4   not on a second computer of said real computer cluster, and
5   wherein, in said real post-failure configuration, said real computer
6   cluster runs said application on said second computer but not on
7   said first computer.

1   3. *(original)* A system as recited in Claim 1 further comprising
2   said real computer cluster, said real computer cluster including
3   profiling software for providing a descriptive profile of said real
4   computer cluster, said virtual-cluster generator generating said
5   virtual cluster in said pre-failure configuration using said
6   descriptive profile.

1   4. *(original)* A system as recited in Claim 3 wherein said real
2   computer cluster is connected to said simulator for providing said
3   descriptive profile thereto.

1   5. *(original)* A system as recited in Claim 2 wherein said
2   simulator further includes an evaluator for evaluating said virtual
3   cluster in its post-failure configuration.

1   6. *(original)* A system as recited in Claim 5 wherein said
2   simulator further includes a test sequencer, said test sequencer
3   selecting different virtual-failure events to be applied to said first
4   virtual cluster in said pre-failure configuration so as to result in
5   different post-failure configurations of said virtual cluster.

1   7. *(original)* A system as recited in Claim 6 wherein said
2   simulator further includes a statistical analyzer for statistically
3   analyzing evaluations of said different post-failure configurations of
4   said virtual cluster.

1   8. *(original)* A system as recited in Claim 7 wherein said test
2   sequencer automatically tests different pre-failure configurations of
3   said virtual cluster against different failure events, said statistical
4   analyzer providing a determination of optimum pre-failure
5   configuration by statistically analyzing evaluations of the resulting
6   post-failure configurations.

1   9. *(original)* A system as recited in Claim 8 wherein said
2   simulator is connected to said real computer cluster for providing
3   said determination thereto, said real computer cluster automatically
4   reconfiguring itself as a function of said determination.

1   10. *(original)* A method comprising:

2   a) generating a first virtual computer cluster in a virtual pre-

3 failure configuration that can serve as a model for a real computer

4 cluster in a pre-failure configuration that responds to

5 predetermined types of failures by reconfiguring to a real post-

6 failure configuration, said reconfiguring including migrating a real

7 application on one real computer of said real computer cluster to

8 another real computer of said real computer cluster;

9   b) selecting a sequence of at least one of said predetermined

10 types of failures; and

11   c) generating a second virtual computer cluster in a virtual post-

12 failure configuration that can serve as a model for said real

13 computer cluster in said real post--failure configuration.

1   11. *(original)* A method as recited in Claim 10 wherein steps a,

2 b, and c are iterated for different configurations of said real

3 computer cluster and for different sets of said predetermined

4 failure types, said method further comprising providing a

5 recommended configuration for said real computer cluster.

1   12. *(original)* A method as recited in Claim 10 further

2 comprising:

3   gathering profile information about said real cluster in said first

4 configuration, wherein said first virtual computer cluster is

5 generated using said profile information.

1   13. *(original)* A method as recited in Claim 12 wherein steps a,

2 b, and c are iterated for different configurations of said real

3 computer cluster and for different sets of said predetermined

4 failure types, said method further comprising providing a

5 recommended configuration for said real computer cluster.

1   14. *(original)* A method as recited in Claim 13 further

2 comprising:

3   transmitting said recommendation to said real computer cluster;

4 and

5   implementing said recommended configuration on said real

6 computer cluster.